

Amendment to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A network system connected with a plurality of network domains, each of said domains ~~configured of comprising:~~
a communication node ~~that enables~~enabled to transfer an IP packet and process ~~data~~data;
a control network;
a network management ~~system~~system;
a control ~~server~~server; and
a plurality of end systems, ~~characterized in that:~~
wherein said end system located in any one of said network domains operates to transmit to said communication node a communication request in which the communication quality is guaranteed to another network domain, said communication node having received said communication request operates to request a request for setting a communication path between said network domains to said network management system, said network management system operates to determine if a network resource exists in said another network domain corresponding to the request for setting the communication path, and if yes, arbitrate ~~said local~~the network domain where the end system is located with said another

network domain, and set the communication path in which the communication quality is guaranteed over both of said network ~~domains~~domains.

wherein if the request for setting a QoS-guaranteed communication path indicates reservation of a network resource between said network domains, said network management system operates to break the network resource request into a set of network resource elements corresponding to the respective communication nodes with reference to a path control table received from said communication node into a set of network resource elements, convert said request into a set of request for reserving each network resource element, enter the reserving information of the corresponding network resource element for each converted reserving request, and determine if said network resource element can be reserved on the basis of the qualification information of a request source having issued said reserving request and network resource allocating information, and

wherein the request processing performed with respect to the communication node is performed by the control server through the control network.

2. (original) A network system as claimed in claim 1, wherein said network management system having received the communication request in which the communication quality is guaranteed to said another network domain by said communication node operates to determine if a network resource exists in said another network domain in response to said communication request, based on the

qualification information of a request source having issued said communication request and a network resource allocating policy.

3. (canceled)

4. (canceled)

5. (currently amended) A network system as claimed in ~~claim 5~~claim 1, wherein the determination as to whether or not said reservation is enabled is carried out by determining if a requested bandwidth can be secured in a required timing as to one line leading from requested communication node to the next communication node on the communication path.

6. (currently amended) A network system as claimed in ~~claim 4~~claim 1, wherein said reserving request is composed of two types of requests, the request for reservedly setting a communication path in which the communication quality is guaranteed and the other request for promptly setting said communication path.

7. (canceled)

8. (new) A network system according to claim 1, wherein the control network is separated from a network configured by a mutual connection of communication nodes due to the communication path between said network domains.

9. (new) A network system comprising a plurality of network domains coupled by line from one another, each of the network domains including a communication node capable of transferring an IP packet and process data, a network management system, a control server, and a plurality of end systems, wherein

in each one of the network domains,

the network management system manages a user-information database, a policy database and in-domain network component information;

the control server includes a resource database, a resource reserving means, a domain border determining means and an inter-organization arbitrating means;

the resource reserving means accepts a request for network resource, based on a request for setting a QoS-guaranteed communication path, issued within the each one of the network domains or from another of the network domains through the domain border determining means, and obtains a network resource corresponding to the request for network resource within the each one of the network domains based on the user-information database, the policy database and the in-domain network component information from the network management system and network resource information provided in the resource database;

the domain border determining means issues the request for network resource to the inter-organization arbitrating means when the requested network resource is a network resource on the line between the each one of the network domains and the another of the network domains or a network resource belonging to the another of the network domains; and

the inter-organization arbitrating means negotiates with another inter-organization arbitrating means provided in another control server within the another of the network domains to obtain a network resource corresponding to the request for network resource,

wherein if the request for setting a QoS-guaranteed communication path indicates reservation of a network resource between said network domains, said network management system operates to break the network resource request into a set of network resource elements corresponding to the respective communication nodes with reference to a path control table received from said communication node into a set of network resource elements, convert said request into a set of request for reserving each network resource element, enter the reserving information of the corresponding network resource element for each converted reserving request, and determine if said network resource element can be reserved on the basis of the qualification information of a request source having issued said reserving request and network resource allocating information.

10. (new) A network system according to claim 9, wherein

when a network resource corresponding to the request for network resource is not obtained within the each one of the network domains based on the user-information database, the resource reserving means obtains a replacement network resource information from the resource database and obtains a network resource corresponding to the request for network resource based on the replacement network resource information.

11. (new) A network system according to claim 9, wherein

the request for setting a QoS-guaranteed communication path is a network resource reserving request or a network resource prompt request, and wherein the resource reserving means and the inter-organization arbitrating means of the each one of the network domains reserves or promptly obtains a network resource corresponding to the request for network resource in accordance with the network resource reserving request or the network resource prompt request.

12. (new) A network system according to claim 11, wherein

when the request for setting a QoS-guaranteed communication path is the network resource reserving request, the resource reserving means of the each one of the network domains obtains and releases a reserved network resource corresponding to the request for network resource at a reserved start time and an end time, respectively.

13. (new) A network system according to claim 11, wherein

when the request for setting a QoS-guaranteed communication path is the network resource prompt request, the resource reserving means of the each one of the network domains releases the obtained network resource in accordance with a request for releasing the obtained network resource.

14. (new) A network system according to claim 10, wherein

the request for setting a QoS-guaranteed communication path is a network resource reserving request or a network resource prompt request, and wherein the resource reserving means and the inter-organization arbitrating means of the each one of the network domains reserves or promptly obtains a network resource corresponding to the request for network resource in accordance with the network resource reserving request or the network resource prompt request.

15. (new) A network system according to claim 14, wherein

when the request for setting a QoS-guaranteed communication path is the network resource reserving request, the resource reserving means of the each one of the network domains obtains and releases a reserved network resource corresponding to the request for network resource at a reserved start time and an end time, respectively.

16. (new) A network system according to claim 14, wherein:

when the request for setting a QoS-guaranteed communication path is the network resource prompt request, the resource reserving means of the each one of the network domains releases the obtained network resource in accordance with a request for releasing the obtained network resource.

17. (new) A network system according to claim 9, wherein the control network is separated from a network configured by a mutual connection of communication nodes due to the communication path between said network domains.